Declassified in Part - Sanitized Copy Approved for Release 2012/08/13: CIA-RDP83-00415R012200040004-7 THIS REPORT IS NOT TO BE FURTHER TRANSMITTED WITHIN THE UNITED INTELLOFAX 29 STATES, OR BEYOND THE BORDERS OF THE UNITED STATES, WITHOUT THE EXPRESS PERMISSION OF THE FEB 1952 "" RELEASING OFFICE CENTRAL INTELLIGENCE AGENCY SECRET/CONTROL - US OFFICIALS ONLY CLASSIFICATION 50X1-HUM SECURITY INFORMATION INFORMATION REPORT REPORT CD NO. DATE DISTR. 22 July 1952 COUNTRY USSR DO NOT CIRCULATE NO. OF PAGES Tubes Used in Soviet Mine Detectors SUBJECT NO. OF ENCLS. DATE OF 50X1-HUM INFO. SUPPLEMENT TO PLACE REPORT NO. **ACQUIRED** HIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES, WITHIN THE MEANING OF TITLE 18, SECTIONS 793 THIS IS UNEVALUATED INFORMATION AND 794, OF THE U.S. CODE, AS AMENDED. ITS TRANSMISSION OR REVE-LATION OF ITS CONTENTS TO OR RECEIPT BY AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. THE REPRODUCTION OF THIS FORM IS PROHIBITED. 50X1-HUM 1. The mark "UB-240" and mark "SO-243" electronic tubes are used in the Soviet mine detectors (1950) types "VIM-695", "VIM-625", "VIM-210", and "VIM-203". The mark "UB-240" tube is a battery-heated amplifying (Usilitelnaya s Batareinim Katodom) low power triode, miniature series, two-wolt heater. It has an octal base (see sketch A on attachment). 2. The mark "SO-243" tube is a special amplifier with an oxide cathode (Spetsialnaya Ustlitelinaya s Oksidmin Katodom). (See sketch B on attachment.) 3. The Soviets also have a tube mark "OSO-243". 50X1-HUM 4. Both Soviet mine detectors "VIM-625" and "VIM-695" are in service. They both react only to mines which have metal parts. The principle of perception is that the buzz heard in the headphones changes pitch when the search frame approaches metal. The search frame has a self-inducting coil and a valve oscillator. The mine detectors "VIM-625" and "VIM-695" can detect a metal plate of 100 mm by 100 mm and one mm thick within a distance of 30 to 35 cm. from its search frame. In water the sensibility declines and at a depth of one meter the search frame does not react at all to the proximity of metal. 50X1-HUM There is a stethoscope mine detector (1949) in the Soviet Army which is used to locate enemy mines in buildings, walls, etc. An illustration showing this detector in operation has appeared in a DOSARM publication. SECRET/CONTROL - US OFFICIALS ONLY CLASSIFICATION DISTRIBUTION NSRB STATE NAVY AIR

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5. Electrical mine detectors (Elektricheskiya minoiskateli) react only on mines containing metal parts. Six locators of this type are described below:

					No. of		Tension of	Duration
	Mark*	Model	Weight	Size of frame	radio lamps	<u>voltage</u>	anode battery (volt/amp)	of battery (hrs.)
	IM-210	1940	(kg)	450 x 250 mm	2	1.2	60/8	24
	IM-203			round form radius	. 2	2.8	60/8	5
1	<i>52</i> 2	*	an.	380 mm		69		
	IM-203	1942	6.6	round form radius	2	4.2	60/8	30
	IM-203	1942	6.6	295 x 345 mm	2	4.2	60/8	3 0
	IM-203 IM-695	1942	6.6 6.0	round form radius	1	4.2 2.8	60/8 60/5	10
	IM-625	1942	6.0	round form radius 380 mm	1.	2.8	60/2.5	10
	* IM-	Iskatel	min -	searcher of mines	l			

All these mine locators, when working, create a certain sound heard through the headphones. As soon as the frame of the mine locator gets near a piece of metal, to a distance of 45 cm. or nearer, the tone of the sound changes and the sound continues to change in getting nearer the metal. 50X1-HUM

Attachment: Sketch of the mark "UB-240" and "SO-243" tubes.

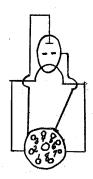
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Attachment

Sketch A - Mark "UB-240" Tube



2 & 7 Heater pins 3 Anode pin 5 Grid pin

Sketch B - Mark "\$0-243" Tube



2 & 7 Heater pins

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